

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claims 1-15 (canceled)

16. (New): A method of depositing an aluminum nitride layer on an exposed surface of previously deposited insulating layer on a substrate, said method comprising:

treating the exposed surface with hydrogen or a gaseous source of hydrogen in the presence of a plasma; and

depositing the aluminum nitride layer over the exposed surface,

wherein the hydrogen treatment occurs prior to or during the deposition of the aluminum nitride layer, and wherein the extent of the hydrogen treatment is such that the x-ray diffraction peak half width on a crystallographic plane of the deposited aluminum nitride layer is narrowed.

17. (New): The method as claimed in Claim 16 wherein the plasma is an Inductively Coupled Plasma.

18. (New): The method as claimed in Claim 17 wherein the substrate is placed on an RF biased platen.

19. (New): The method as claimed in Claim 18 wherein the platen is heated.

20. (New): The method as claimed in Claim 16 wherein the aluminum nitride layer is deposited as a piezoelectric layer of an acoustic wave device.

21. (New): A method of depositing an aluminum nitride layer on an exposed surface of previously deposited insulating layer on a substrate, said method comprising:

treating the exposed surface with hydrogen or a gaseous source of hydrogen in the presence of a plasma; and

depositing the aluminum nitride layer over the exposed surface,

wherein the hydrogen treatment occurs prior to or during the deposition of the aluminum nitride layer, and wherein the plasma is supplied by a Reactive Ion Etching process.

22. (New): The method as claimed in Claim 21 wherein the hydrogen treatment time is less than 15 minutes.

23. (New): The method as claimed in Claim 21 wherein the aluminum nitride layer is deposited as a piezoelectric layer of an acoustic wave device.

24. (New): The method of treating an aluminum nitride layer including subjecting the aluminum nitride layer to atomic hydrogen so as to enhance the <111> crystallographic orientation of a conductive layer deposited on the aluminum nitride layer.

25. (New): The method as claimed in Claim 24 wherein the aluminum nitride layer is deposited as a piezoelectric layer of an acoustic wave device.

26. (New): The method as claimed in Claim 24 further including simultaneously subjecting the aluminum nitride layer to hydrogen plasma and depositing the conductive layer by metallic sputtering.